

AMENDMENTS TO THE CLAIMS

This listing replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently amended) A targeted gene delivery method that comprises bringing bispecific ligands, ~~[[having]]~~ which have a specificity for a mammalian cell surface receptor that is capable of activating receptor-mediated endocytosis, into contact with (a) intact, bacterially derived minicells that are approximately 400 nm in diameter and that contain a plurality of therapeutic nucleic acid ~~[[sequence]] sequences, each~~ operably linked to a promoter, and (b) non-phagocytic mammalian cells, such that (i) said bispecific ligands cause said minicells to bind to said mammalian cells, ~~[[and]]~~ (ii) said minicells are engulfed by said mammalian cells, are degraded in late endosomes, and release therapeutic nucleic acid sequences, [[which produce an]] and (iii) therapeutic nucleic acid sequences escape from said late endosomes and are transported to mammalian cellular nuclei, permitting expression product of said of therapeutic nucleic acid ~~[[sequence]] sequences.~~

2. (Cancelled)

3. (Currently Amended) The method according to claim 1, wherein said bispecific ~~[[ligand]] ligands~~ [[comprises a first arm that carries]] further have a specificity for a ~~[[bacterially derived minicell]] surface structure on said minicells~~ [[and a second arm that carries specificity for a non-phagocytic mammalian cell surface receptor]].

4. (Previously Presented) The method according to claim 3, wherein said first arm and said second arm are monospecific.

5. (Previously Presented) The method according to claim 3, wherein said first arm and said second arm are multivalent.

6. (Previously presented) The method according to claim 3, wherein said minicell surface structure is an O-polysaccharide component of a lipopolysaccharide on said minicell surface.

7. (Previously presented) The method according to claim 3, wherein said minicell surface structure is a member of the group consisting of outer membrane proteins, pili, fimbriae, flagella, and cell-surface exposed carbohydrates.

8. (Cancelled)

9. (Previously presented) The method according to claim 1, wherein said bispecific ligand comprises an antibody or antibody fragment.

10-11. (Cancelled)

12. (Currently Amended) The method according to claim 1, wherein said therapeutic nucleic acid [[sequence encodes]] sequences comprise a suicide gene.

13. (Currently Amended) The method according to claim 1, wherein said therapeutic nucleic acid sequences comprise [[encodes]] a normal counterpart of a gene that expresses a protein that functions abnormally or is present in abnormal levels in said mammalian cells.

14. (Previously presented) The method according to claim 1, wherein said mammalian cells are in vitro.

15. (Previously presented) The method according to claim 1, wherein said mammalian cells are in vivo.

16. (Currently Amended) The method according to claim 1, wherein said therapeutic nucleic acid sequences each is contained on a plasmid comprised of multiple nucleic acid sequences.

17. (Previously presented) The method according to claim 16, wherein said plasmid comprises a regulatory element.

18. (Previously presented) The method according to claim 16, wherein said plasmid comprises a reporter element.

19-35. (Cancelled)

36. (New) The method according to claim 1, wherein at least some of said minicells each contains at least 11 therapeutic nucleic acid sequences.

37. (New) The method according to claim 1, wherein at least some of said minicells each contains at least 60 therapeutic nucleic acid sequences.

38. (New) The method according to claim 1, wherein said mammalian cell surface receptor is overexpressed on the cell surface of said non-phagocytic mammalian cells.